



## Arizona State Retirement System Strategic Investment Policy (SIP007)

### Funding Policy

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#### **Purpose:**

The intent of the ASRS funding policy is to establish a formal methodology for financing the pension, health insurance (HI), and long-term disability (LTD) obligations accruing under the ASRS. It is intended that current assets, plus future contributions from employees and employers, plus investment earnings, should be sufficient to finance all benefits provided by the ASRS for each of its various plans.

This funding policy is intended to reflect a reasonable approach for each generation of employees and employers to substantially pay the cost of the benefits accrued. This funding policy recognizes there will be volatility with respect to investment returns, plan membership, membership demographics, mortality, and other variables that impact the long-term cost, and allocation of cost, of the programs.

The adoption of a funding policy is recommended by the Government Finance Officers Association (GFOA), the Governmental Accounting Standards Board (GASB), and the actuarial profession. The ASRS also believes it is a prudent action to take.

The ASRS funding policy has 11 components which are subsequently discussed in this policy.

Components #2 through #4 describe the perspectives of the ASRS in determining which approaches should be utilized in meeting the goal and objectives of this funding policy.

Components #5 through #9 describe the consequent approaches the ASRS utilizes in meeting the goal and objectives of this funding policy.

Components #10 through #11 describe the communication and management of this funding policy.

1. Goal and Objectives
2. Time Horizon and Volatility Perspective
3. Inter-Generational Equity (Time Series Equity) Perspective
4. Benefit Costing (Cross Sectional Equity) Perspective
5. Actuarial Methods and Funded Status
6. Actuarial Assumptions
7. Actuarial Process
8. Asset Approach to Portfolio Construction
9. Investment Beliefs and Investment Policy Statement
10. Transparency and Mutual Understanding
11. Governance

## **1. Goal and Objectives**

The goal of the ASRS Funding Policy is to ensure a well thought through and documented process is in place that creates a reasonable expectation the various ASRS benefits will be fully funded in a manner consistent with the capital market, demographic, risk tolerance, and other parameters of the ASRS.

Specifically, the ASRS will make funding decisions toward the following objectives:

- I. Ensuring long-term full funding.
- II. Mitigating benefit costs, primarily through early contributions and a long -term risk profile.
- III. Mitigating contribution rate volatility.
- IV. Mitigating inter-generational wealth transfers.

## **2. Time Horizon and Volatility Perspective**

The ASRS believes that contribution rates are the primary economic financial outputs of funding and investment policies. The ASRS believes that a going concern (or long-term) and primarily asset-only approach to investment management can result in contribution rates that are both lower and relatively insensitive to short- and medium-term portfolio volatilities. This enables the ASRS to combine the traditional cross-sectional diversification benefits found in large employee pooled plans with the time-series diversification benefits of multi-generational plans, thereby resulting in higher expected short-term investment volatility enabling higher expected long-term investment returns.

The impact on contribution rates of any realized short-term volatility of returns will be mitigated through actuarial time-series diversification (smoothing and amortizing), rather than by lowering short-term expected return volatility at the expense of lower expected returns (and therefore higher aggregate contribution rates).

As such, the ASRS is managed on a going-concern basis, with the following timeframes being utilized for portfolio construction decisions and contribution rate determination.

Portfolio Construction Decisions:

- Strategic asset allocation focuses on medium-term (3-5 years) capital market assumptions, subject to achieving the long-term assumed actuarial rate based on long-term (30 year) capital market assumptions.
- Tactical deviation decisions are based on shorter-term (less than 3-5years) capital market expectations.

Contribution Rate Determination:

- Liabilities are discounted based upon long-term (30 year) capital market expectations.
- Contribution rates are established using longer-term (currently 10 year) investment valuation smoothing periods, and longer-term (currently 30 years for Pension and 15 years for HI and LTD) closed period deficit/surplus amortization periods.

### **3. Inter-Generational Equity (Time Series Equity) Perspective**

Under normal conditions the ASRS will strive to align the aggregate funding costs (normal costs plus amortization costs) over the generational period in which corresponding benefits accrue. During periods where the funded status deviates significantly from 100%, aggregate funding costs may expand beyond generational periods.

Permanent Benefit Increase (PBI) amounts were initially amortized over the same period as the unfunded actuarial accrued liability, and subsequently over a period of 15 years or less, or over the average life expectancy of the retirees, once future PBIs were actuarially determined and granted. The reason the amortization period was made less than the pension amortization period was due to the fact that PBIs were payable only to current retirees, and therefore had a lower average duration. The reason PBIs were not pre-funded by estimating their current expected present values was because PBIs would most typically be created during periods when there are repetitive years of high rates of return, which are more likely to be followed by falling contribution rates. As a result, by utilizing the shorter-term amortization method of funding rather than pre-funding, PBIs would more likely be funded during periods of lower contribution rates, therefore furthering the objective of inter-generational equity. Actuarial standards of practice are now generally interpreted to require that future possible PBIs be estimated and pre-funded, and as a result possible future PBIs will be pre-funded beginning with the June 30, 2017 valuation.

### **4. Benefit Costing (Cross Sectional Equity) Perspective**

The ASRS will consider fairness and appropriateness when determining whether or not to align the benefits accrued and costs paid by individual members for different programs.

The ASRS will also consider the various pricing and risk-sharing advantages that are afforded to groups (rather than individuals) for different programs.

### **5. Actuarial Methods and Funded Status**

#### **Actuarial Cost Allocation Method**

The primary purpose of an actuarial cost allocation method is to allocate the present value of future benefits to past, current, and future periods of time. The ASRS was initially mandated by statute to use the Entry Age Normal (EAN) method, and subsequently in 1989 mandated by statute to use the Projected Unit Credit (PUC) method. Legislation was successfully promulgated by the ASRS in 2015 to allow the ASRS itself to consider the most appropriate method for the June 30, 2016 period forward.

In order to be consistent with current ~~accounting~~ Generally Accepted Accounting Principles (GAAP), as well as with the most common method among peers, the ASRS changed to the EAN method for valuations on and after June 30, 2017.

Key factors to be considered in determining any future change in the actuarial cost allocation method are:

- Membership Demographics

- Impact on Contribution Rates
- Impact on Contribution Rate Volatility
- Impact on Intergenerational Equity
- Accounting Consistency
- Peer Consistency
- Impact on Funded Status

The actuarial cost allocation method adopted will be presented to, and discussed by, the ASRS Board of Trustees (Board) every five years to ensure it continues to be the most appropriate method. This presentation and discussion will occur within one year of the actuarial experience study, which is also conducted at least every five years.

#### Asset Value Smoothing

The primary purpose of the asset-value smoothing process is to mitigate contribution rate volatility.

The constraint applied to the length of the asset-value smoothing process is related to both the magnitude of, and the duration of, the dispersion between smoothed and unsmoothed asset values. In general, the smoothed and unsmoothed asset values should cross or become equal approximately every 10 years or less.

Shorter smoothing periods are preferred to longer smoothing periods, subject only to the primary purpose of mitigating contribution rate volatility and the absolute magnitude of the volatility.

Based upon the above, the following asset-smoothing periods are currently utilized:

- Pension: 10 Years
- Health Insurance: 10 Years
- LTD: 10 Years

#### Amortization of Unfunded Liabilities and Funded Status

The primary purpose of the amortizing process is to mitigate contribution rate volatility while ensuring the unfunded liabilities are paid off in a reasonable period of time.

The constraints applied to the length of the amortization period are related to contribution rate volatility and magnitude, intergenerational equity, and desire to pay off deficits sooner rather than later.

Shorter amortization periods are preferred to longer amortization periods, subject only to the primary purpose of mitigating contribution rate volatility and the absolute magnitude of the volatility.

Unfunded liabilities shall be amortized utilizing either level dollar amortization or constant percentage of pay amortization, over a closed period, not to exceed 30 years, and are currently amortized according to the dates in the table below.

The employee and employer contribution rates will be modified through time to reflect actual experience and changing expectations, and will be set such that, in combination with

investment returns, they will bring the funds to fully funded status within a reasonable period.

The unfunded liability amortization periods are shown in the table below, along with the dates on which the unfunded liabilities that existed as of June 30, 2014, are expected to be fully funded on an unsmoothed asset basis.

Note: The following dates were determined based upon unfunded liabilities that existed as of June 30, 2014 and therefore do not include the unfunded liability increases that resulted from implementing changes that resulted from the 2017 experience study.

	<u>Amortization Period</u>	<u>Expected Full Funding Date</u>
• Pension:	30 Years	June 30, 2037
<i>For UAAL experience beginning on or before June 30, 2018.</i>		
• Pension:	25 Year	
<i>For UAAL experience beginning after June 30, 2018.</i>		
• Health Insurance:	15 Years	June 30, 2015
• LTD:	15 Years	June 30, 2025

#### Corridor:

Significant positive or negative investment experience may result in a significant spread between the actuarial value of assets and the market value of assets, and could therefore result in the calculation of shorter term contribution rates that do not fund the liabilities quickly enough. In order to mitigate the divergence between the actuarial value of assets and the market value of assets, while also allowing for a reasonable transition period for increasing and decreasing contribution rates, a corridor of 30% will be utilized. Therefore, the actuarial value of assets is limited to be within 70% and 130% of the market value of assets. Implementing a corridor is also consistent with Government Finance Officers Association California Actuarial Advisory Panel and Conference of Consulting Actuaries Public Plans Community papers.

## **6. Actuarial Assumptions**

The ASRS will utilize investment returns, mortality expectations, income adjusted mortality, benefit option choices, withdrawal option choices, and other assumptions that best reflect ASRS-specific expectations with respect to capital markets, and employee, retiree, and inactive member demographics. These assumptions may utilize ASRS-specific history, industry tables, as well as current and projected trends to best determine and allocate benefit costs. The assumptions should be forward-looking with appropriate consideration given to past experience.

## **7. Actuarial Process**

The ASRS will retain an external independent actuary to conduct annual valuations of the ASRS plans, specifically to calculate funded status and contribution rates. In addition, the external independent actuary will measure and report to the Board the annual progression towards a fully funded status, as measured on an unsmoothed asset basis.

The ASRS will retain an external independent actuary to conduct an experience study of the ASRS plans every five years. This actuary may be the same actuary that conducts the annual valuations.

The ASRS will retain an external independent actuary to conduct an actuarial audit of the ASRS Plans at least every five years. The actuarial firm that performs the actuarial audit shall not be the same firm that performs the actuarial valuation or the actuarial experience study.

The purpose of the actuarial audit shall include:

- The validation and verification of actuarial valuation results for both funding and accounting.
- An evaluation of the reasonableness of actuarial assumptions and methods.
- Compliance with professional standards such as generally accepted actuarial standards.

Separate actuarial valuations shall be prepared for the following plans:

- Pension Plan and Health Insurance Plan
- System
- Long Term Disability Plan

## **8. Asset Approach to Portfolio Construction**

The ASRS portfolio construction process will be substantially based upon a going-concern model where time-series diversifications of return are enabled by asset-valuation smoothing and surplus/deficit amortization.

This going concern model allows two fundamental strategies as follows:

1. Fundamentally asset-only approach to portfolio construction
2. Absorption of interim volatility

The above attributes allow for lower overall expected program costs, while maintaining reasonable contribution rate volatility.

## **9. Investment Beliefs and Investment Policy Statement (IPS)**

ASRS Investment Beliefs have been established to ensure the development of congruent and synergistic investment strategies, and to ensure the effective and efficient allocation of resources. These [Investment Beliefs](#) determine the general paradigm within which investment strategies are developed, investment ideas are reviewed, and investment decisions

are implemented. The Investment Beliefs support the idea of a well-diversified portfolio utilizing a fundamentally asset-only portfolio construction approach. The ASRS recognizes that a well-articulated [Investment Policy Statement](#) (IPS) is important to the long-term success of achieving the ASRS investment objectives and to meet the goal of this Funding Policy. As such, the ASRS has developed the IPS with the following goals:

- To clearly and explicitly establish the objectives and parameters which govern the investment of ASRS assets.
- To establish a target asset allocation that is long-term in nature but dynamic enough to allow the ASRS to take advantage of market opportunities which is expected to achieve its investment rate of return objectives.
- To help protect the financial health of the ASRS.
- To establish a framework for monitoring investment activity, and promote effective communication between the Board, Staff, and other involved parties.

## **10. Transparency and Mutual Understanding**

This Funding Policy will be posted on the ASRS website for easy access.

This Funding Policy will enable a homogeneous understanding of how high-level funding decisions are contemplated at the ASRS by technical experts (e.g. actuaries), internal decision makers (e.g. Board and ASRS Director), and external policy makers (e.g. Legislature and Executive Office).

## **11. Governance**

This Funding Policy will be referenced in the [Board Governance Policy Handbook](#) as a responsibility of the Board to approve, modify, and monitor.

This Funding Policy will be referenced in the Board Governance Policy Handbook as a responsibility of the Director to review, analyze, implement, and present to the Board at the following time periods:

- Every three years,
- Whenever a significant event impacts the policy, or
- Whenever the Director recommends a modification.